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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,845	11/29/2001	Jer-Chuan Huang	2041002	9618

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EXAMINER

HANNETT, JAMES M

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/017,845

Applicant(s)

HUANG, JER-CHUAN

Examiner

James M Hannett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The spacing of the lines of the specification is such as to make reading and entry of amendments difficult. New application papers with lines double spaced on good quality paper are required.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Compact biometrics imaging system that utilizes a triangular prism and a plurality of LED light sources to capture images.

Claim Objections

Claim 5 is objected to because of the following informalities: Claim 5 recites the limitation "said detector" in Line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1: Claims 1, 3, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

USPN 6,115,484 Bowker et al in view of USPN 6,127,674 Shinzaki et al.

2: As for Claim 1, Bowker et al teaches on Column 15, Lines 39-49, Column 16, Lines 22-23 and Column 18, Lines 5-14 and depicts in Figure 1 a optical system for image capture,

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comprising a special optical component (110 and 121) consists of a first lens (121) and a triangular prism (110) as a whole; a uniform light source (LED); a detector (126) installed at the first lens side (120) of the special optical component (110 and 121); a second lens (123) installed between the special optical component (110 and 121) and the detector (126);

However, Bowker et al does not teach the use of installing an aperture between the special optical component (110 and 121) and the second lens (123).

Shinzaki et al teaches on Column 5, Lines 46-50 and depicts in Figure 1 a finger print detection system that utilizes a prism (11) to view a fingerprint. Shinzaki et al teaches the use of a second lens (14) to focusing the image onto a detector (16). Furthermore, Shinzaki et al teaches that it is advantageous to place a diaphragm (13) between the prism and the second lens (14) In order to control the amount of incident light onto the detector (16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to install the diaphragm of Shinzaki et al between the prism (110) and second lens (123) of Bowker et al, In order to control the amount of incident light onto the detector (126).

3: As for Claim 3, Bowker et al further depicts in Figure 1 that the first lens (121) is a Plano-convex lens.

4: As for Claim 5, Bowker et al teaches on Column 15, Lines 39-49, Column 16, Lines 22-23 and Column 18, Lines 5-14 and depicts in Figure 1 a method for image capture, comprising installing a uniform light source (LED) at the side of a triangular prism (110) of a special optical component (110 and 121), wherein the special optical component (110 and 121) consists of a first lens (121) and the triangular prism (110); installing a detector (126) at the side of the first

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lens (121) of the special optical component (121 and 110); installing a second lens (123) between the special optical component (110 and 121) and the detector (126);

However, Bowker et al does not teach the use of installing an aperture between the special optical component (110 and 121) and the second lens (123).

Shinzaki et al teaches on Column 5, Lines 46-50 and depicts in Figure 1 a finger print detection system that utilizes a prism (11) to view a fingerprint. Shinzaki et al teaches the use of a second lens (14) to focusing the image onto a detector (16). Furthermore, Shinzaki et al teaches that it is advantageous to place a diaphragm (13) between the prism and the second lens (14) In order to control the amount of incident light onto the detector (16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to install the diaphragm of Shinzaki et al between the prism (110) and second lens (123) of Bowker et al, In order to control the amount of incident light onto the detector (126).

5: As for Claim 7, Bowker et al further depicts in Figure 1 that the first lens (121) is a Plano-convex lens.

6: Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,115,484 Bowker et al in view of USPN 6,127,674 Shinzaki et al in further view of USPN 4,924,085 Kato et al.

7: In regards to Claim 2, Bowker et al in view of Shinzaki et al teaches the claimed invention as discussed in Claim 1. However, Bowker et al teaches only the use of a single LED for the light source and does not teach using at least two pairs of LEDs for the light source.

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Kato et al teaches on Column 9, Lines 38-50 and depicts in Figure 9 that it is advantageous when illuminating a finger for fingerprint analysis, to illuminate the finger with a plurality of pairs of LED's in order to uniformly illuminate the fingerprint.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a plurality of pairs of LED's of Kato et al for the light source of Bowker et al in view of Shinzaki et al in order to better uniformly illuminate the fingerprint.

8: In regards to Claim 6, Bowker et al in view of Shinzaki et al teaches the claimed invention as discussed in Claim 5. However, Bowker et al teaches only the use of a single LED for the light source and does not teach using at least two pairs of LEDs for the light source.

Kato et al teaches on Column 9, Lines 38-50 and depicts in Figure 9 that it is advantageous when illuminating a finger for fingerprint analysis, to illuminate the finger with a plurality of pairs of LED's in order to uniformly illuminate the fingerprint.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a plurality of pairs of LED's of Kato et al for the light source of Bowker et al in view of Shinzaki et al in order to better uniformly illuminate the fingerprint.

9: Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,115,484 Bowker et al in view of USPN 6,127,674 Shinzaki et al in further view of USPN 6,069,967 Rozmus et al.

10: In regards to Claim 4, Bowker et al in view of Shinzaki et al teaches the claimed invention as discussed in Claim 1. However, Bowker et al teaches that the image detector (126) is a CCD image sensor and does not teach the use of using a CMOS image sensor for biometrics analysis.

Rozmus et al teaches on Column 3, lines 25-35 that it is advantageous to use CMOS image sensors instead of CCD image sensors because they provide minimal blooming compared to CCD image sensors and therefore improve image quality.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the CCD image sensor of Bowker et al in view of Shinzaki et al with a CMOS image sensor as taught by Rozmus et al in order to minimal blooming and improve image quality.

11: In regards to Claim 8, Bowker et al in view of Shinzaki et al teaches the claimed invention as discussed in Claim 5. However, Bowker et al teaches that the image detector (126) is a CCD image sensor and does not teach the use of using a CMOS image sensor for biometrics analysis.

Rozmus et al teaches on Column 3, lines 25-35 that it is advantageous to use CMOS image sensors instead of CCD image sensors because they provide minimal blooming compared to CCD image sensors and therefore improve image quality.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the CCD image sensor of Bowker et al in view of Shinzaki et al with a CMOS image sensor as taught by Rozmus et al in order to minimal blooming and improve image quality.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 5,812,252 Bowker et al see Figure 1; USPN 5,210,588 Lee see Figure 1; US 2002/0110266 Teng et al see Figure 1; USPN 6,753,919 Daugman; USPN 5,900,993 Betensky

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see Figure 2A and the abstract; USPN 3,527,535 Monroe see Figure 7; USPN 6,166,370 Sayag see Figure 12.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M Hannett whose telephone number is 703-305-7880. The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett
Examiner
Art Unit 2612

JMH
October 21, 2004


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